



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/815,760

04/02/2004

Michiko Endo

1614.1168C

9967

21171

7590

05/01/2006

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

DHARIA, PRABODH M

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/815,760	Applicant(s) ENDO, MICHIO
	Examiner Prabodh M. Dharja	Art Unit 2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 23-27 is/are pending in the application.
- 4a) Of the above claim(s) 16-22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 and 23-25 is/are allowed.
- 6) ☒ Claim(s) 26 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04-02-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2629

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. **Status:** Please all the replies and correspondence should be addressed to Examiner's new art unit 2629. Receipt is acknowledged of papers submitted on 02-22-2006 under election, which have been placed of record in the file. Claims 1-15 and 23-27 are pending in this action. Claims 16-22 are withdrawn from consideration.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Logue (5,559,432) in view of Houston (4,853,630).

Regarding Claim 26, Logue teaches a coordinate input apparatus (Col. 2, Lines 5-10) for designating a set of coordinates in three-dimensional space (Col. 3, Lines 46-48).

However, Logue fails to recite or disclose a first magnet and a second magnet having a common central axis and respective lines of magnetic flux in opposing relationship, and a plurality of magnetoelectric transducers disposed in a plane transverse to the common central

Art Unit: 2629

axis and each of the plurality of magnetoelectric transducers is fixedly mounted so as not to be in contact with the first magnet and the second magnet, wherein the second magnet is tiltable relatively to the plane of the magnetoelectric transducers, and the magnetoelectric transducers output corresponding voltages having values that vary according to a magnitude of the tilt.

However, Houston teaches a first magnet 21 and a second magnet 22 having a common central axis (see figure 7 at 21 and 22) and respective lines of magnetic flux in opposing relationship (see figure 1-8 at 21,22,30,35-38, Col. 5, Lines 42-53, Column 7, Lines 29-41, Column 9, Line 15 through Column 10, Line 66), and a plurality of magnetoelectric transducers disposed in a plane transverse to the common central axis and each of the plurality of magnetoelectric transducers is fixedly mounted so as not to be in contact with the first magnet (figure 7,8 at 35-38, Column 7, Lines 29-41) and the second magnet, wherein the second magnet is tiltable relatively to the plane of the magnetoelectric transducers (Column 8, Lines 51-59, figure 7, at 21, 35-39), and the magnetoelectric transducers output corresponding voltages having values that vary according to a magnitude of the tilt (see figures 11a-11c, 12, 14 at 66-69, Column 9, Line 15 through Column 10, Line 66).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Houston in to the Logue teaching, to be able to have input device to provide a new position coordinates with new position sensors that provides optimal mobility and ergonomics.

Art Unit: 2629

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lounge (5,559,432) in view of Houston (4,853,630) as applied to claim 26 above, and further in view of Joffe (4,991,836).

Regarding Claim 27, Logue modified by Houston teaches a coordinate input apparatus (Col. 2, Lines 5-10) for designating a set of coordinates in three-dimensional space (Col. 3, Lines 46-48).

However, Logue fails to recite or disclose a holder fixedly mounted with respect to one of the first and second magnets, and a slide support having an outer surface slidably engaging in a mating relationship with the interior surface of the holder and supporting thereon the other of the first and second magnets, and the first and second magnets producing a force of repulsion therebetween to afford rotation of the holder relatively to the slide support and tilting of the other of the first and second magnets with respect to the other of the first and second magnets.

However, Joffe teaches a holder fixedly mounted with respect to one of the first and second magnets (Col. 17, Lines 35-44), and a slide support having an outer surface slidably engaging in a mating relationship with the interior surface of the holder and supporting thereon the other of the first and second magnets (Col. 20, Lines 5-16), and the first and second magnets producing a force of repulsion therebetween to afford rotation of the holder relatively to the slide support (Col. 20, Lines 19-39, Col. 14, Lines 57-60) and tilting of the other of the first and second magnets with respect to the other of the first and second magnets (Col. 8, Lines 60-68).

Thus it would have been obvious to one in the ordinary skill in the art at the time of

Art Unit: 2629

invention was made to incorporate the teaching of Joffe in to the Logue modified by Houston teaching, to be able to have input device with multiple magnets and manipulator controlled by player of the game.

Response to Arguments

6. Applicant's election with traverse of the election requirement in the reply filed on 02-22-2006 is acknowledged. The traversal is on the ground(s) that the various embodiments are closely related as to not required separate fields of search. This is not found persuasive because each species may seem closely related, however they are unique.

The requirement is still deemed proper and is therefore made FINAL.

Allowable Subject Matter

7. Claims 1-15 and 23-25 are allowed.

8. The following is an examiner's statement of reasons for allowance:

A coordinate input apparatus for designating a particular set of coordinate in three-dimensional space, comprising: **a cylindrical magnet having a center axis; an annular magnet having a center axis in common with the center axis of the cylindrical magnet and having an inner circumference larger than an outer circumference of the cylindrical magnet; a plurality of magnetoelectric transducers disposed in a plane transverse to the**

common center axes of the cylindrical and annular magnets, wherein: the cylindrical magnet and the annular magnet are disposed so that respective, identical magnetic poles thereof are in opposing relationship, and the annular magnet is tiltable with respect to the cylindrical magnet and the plane of the magnetoelectric transducers, and the magnetoelectric transducers detect a change in a magnetic field caused by tilting of the annular magnet relatively to the cylindrical magnet and the plane of the magnetoelectric transducers, so as to input two-dimensional coordinate values according to the detected change in the magnetic field.

Cited references on 892's fail to recite or disclose above bold underlines claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Arita (6,266,046 B1) Pointing device for moving and positioning a pointer on a display of a computer.

Art Unit: 2629

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668.

The examiner can normally be reached on M-F 8AM to 5PM.

11. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

PD

AU 2629

04-22-2006


BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600